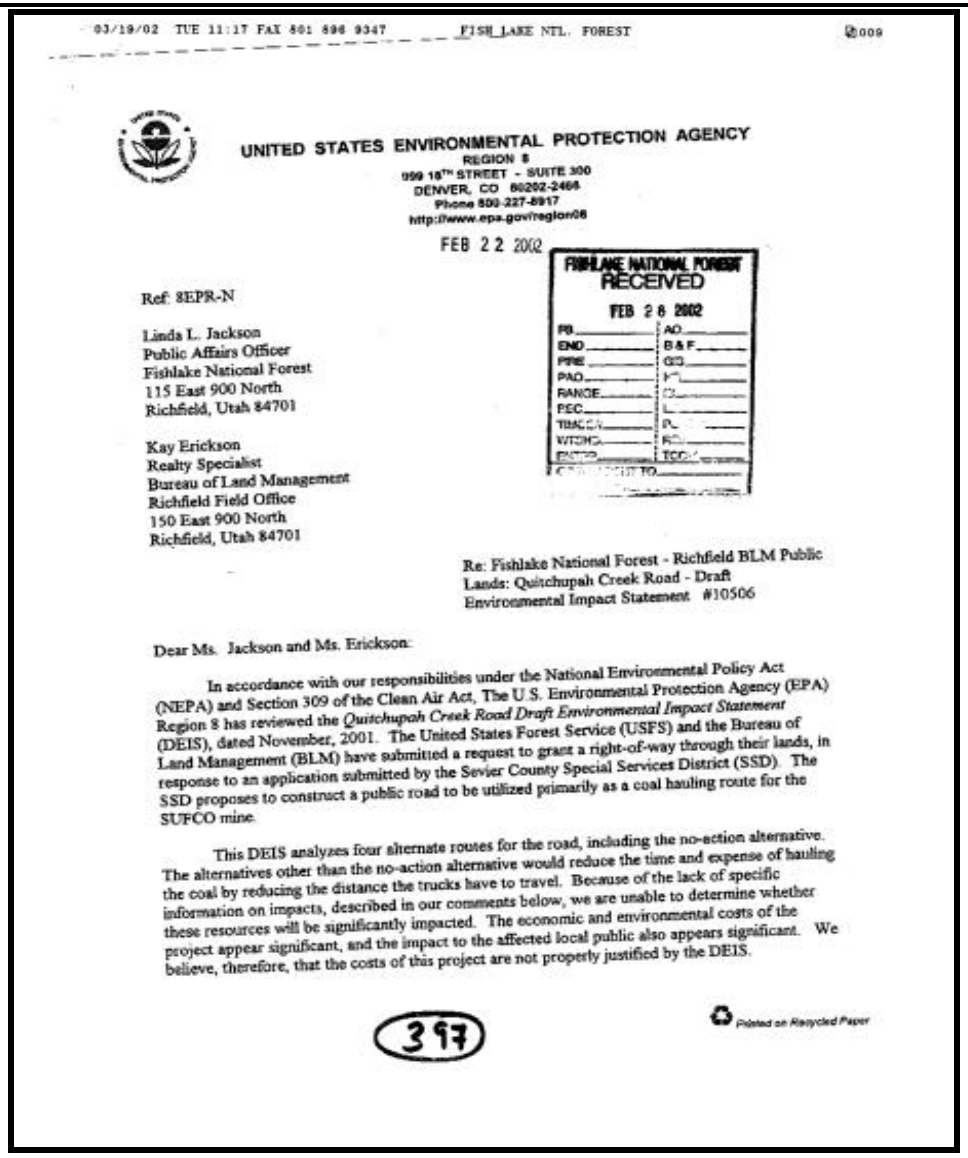
FEDERAL AGENCY LETTERS

Letters Included:
Letter #397 - United States Environmental Protection Agency
Letter #411 - United States Department of the Interior

Letter #397



03/19/02 TUE 11:17 FAX 801 896 9347 FISH LAKE NTL. FOREST 009

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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FEB 22 2002

FISHLAKE NATIONAL FOREST RECEIVED FEB 26 2002

Ref: 8EPR-N

Linda L. Jackson
Public Affairs Officer
Fishlake National Forest
115 East 900 North
Richfield, Utah 84701

Kay Erickson
Realty Specialist
Bureau of Land Management
Richfield Field Office
150 East 900 North
Richfield, Utah 84701

Re: Fishlake National Forest - Richfield BLM Public Lands: Quitchupah Creek Road - Draft Environmental Impact Statement #10506

Dear Ms. Jackson and Ms. Erickson:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, The U.S. Environmental Protection Agency (EPA) Region 8 has reviewed the *Quitchupah Creek Road Draft Environmental Impact Statement* (DEIS), dated November, 2001. The United States Forest Service (USFS) and the Bureau of Land Management (BLM) have submitted a request to grant a right-of-way through their lands, in response to an application submitted by the Sevier County Special Services District (SSD). The SSD proposes to construct a public road to be utilized primarily as a coal hauling route for the SUFCO mine.

This DEIS analyzes four alternate routes for the road, including the no-action alternative. The alternatives other than the no-action alternative would reduce the time and expense of hauling the coal by reducing the distance the trucks have to travel. Because of the lack of specific information on impacts, described in our comments below, we are unable to determine whether these resources will be significantly impacted. The economic and environmental costs of the project appear significant, and the impact to the affected local public also appears significant. We believe, therefore, that the costs of this project are not properly justified by the DEIS.

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397-1

Response 397-1

Impacts to resources have expanded text in the FEIS to further describe them, as described in responses below. Applicant committed measures described in Chapter 2 of the FEIS preclude many of the predicted impacts.

Economic benefits have been further documented in Section 3.15 in the FEIS

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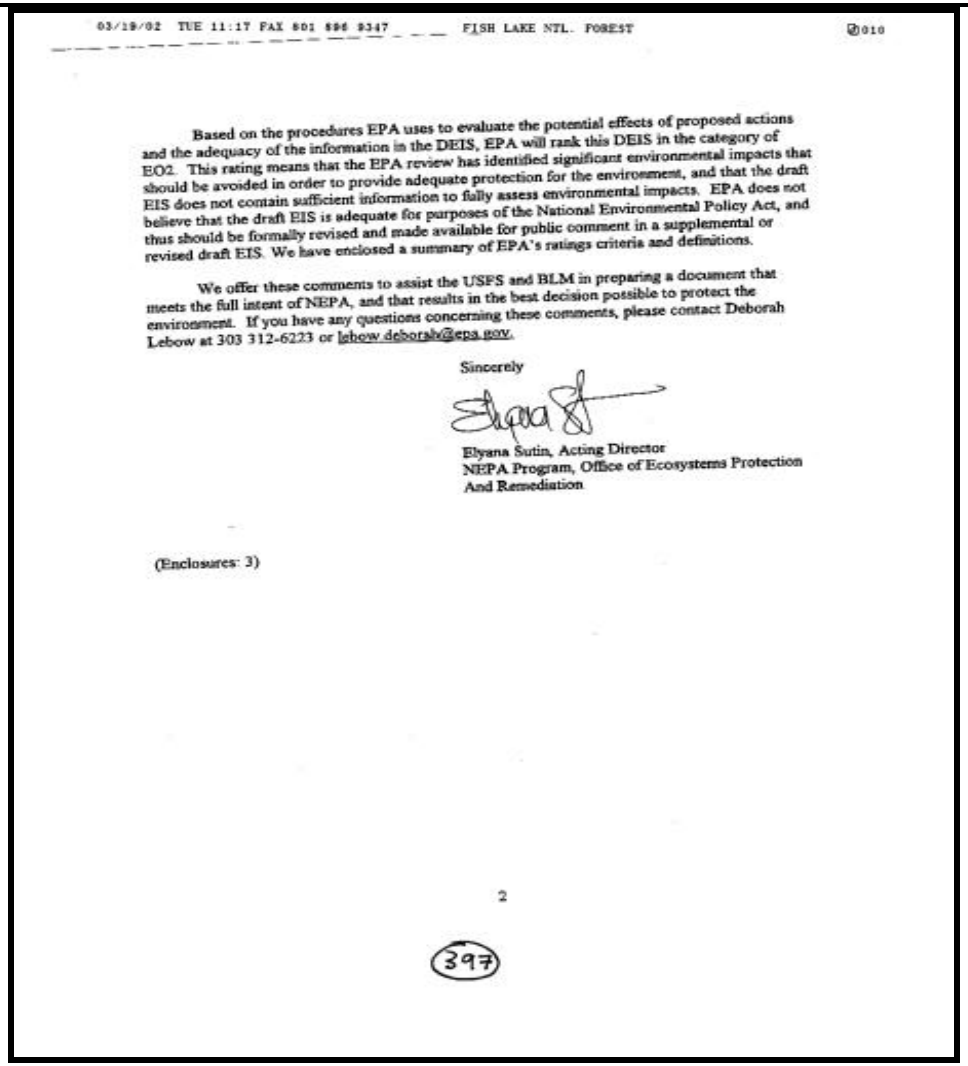
397-1 cont.



03/18/02 TUE 11:17 FAX 801 896 8347 FISH LAKE NTL. FOREST 010

Based on the procedures EPA uses to evaluate the potential effects of proposed actions and the adequacy of the information in the DEIS, EPA will rank this DEIS in the category of EO2. This rating means that the EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment, and that the draft EIS does not contain sufficient information to fully assess environmental impacts. EPA does not believe that the draft EIS is adequate for purposes of the National Environmental Policy Act, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. We have enclosed a summary of EPA's ratings criteria and definitions.

We offer these comments to assist the USFS and BLM in preparing a document that meets the full intent of NEPA, and that results in the best decision possible to protect the environment. If you have any questions concerning these comments, please contact Deborah Lebow at 303 312-6223 or lebow.deborah@epa.gov.

Sincerely

Elyana Sutin, Acting Director
NEPA Program, Office of Ecosystems Protection
And Remediation

(Enclosures: 3)

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Response 397-1 cont.

The construction costs were supplied by Jones & DeMille Engineering. The maintenance costs were derived from the actual costs of maintaining the present coal transport road, the Acord Lakes Road. Table 2.6-1 in Chapter 2 includes costs to construct the proposed road and alternatives but the projected maintenance costs and BMP costs will be included in the FEIS.

Additional information and analysis has been provided in the FEIS for hydrology, soils, socioeconomics, cultural resources, and Native American concerns.

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U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections

The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

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Quitchupah Creek Road Draft EIS
Environmental Protection Agency Comments

397-2

Federal Lands Policy on Rights-of-Way

Section 1763 of the Federal Land Policy and Management Act of 1976 addressing Federal land right-of-way corridors states that "In order to minimize adverse environmental impacts and the proliferation of separate rights-of-way, the utilization of rights-of-way in common shall be required to the extent practicable..." The decision-maker should weigh this policy carefully, given the significant adverse environmental impacts to multiple resources associated with the action alternatives for this right-of-way. While the decision maker may have the discretion to override this policy, this EIS does not lead the reader to the conclusion that it is "impractical" for this mine to continue to utilize its existing right-of-way given that the mine is currently profitable, and likely to remain so.

397-3

Economic Analysis, supporting the Purpose and Need

The public purposes for this project are to save fuel and to promote national efficiency. An additional public purpose may be to provide a secondary route to and from the mine in the event of an emergency. The private purpose is to provide the SUFCO mine a less expensive way to haul coal than the current route, to allow the mine to be more competitive in the coal market. Since this project is a request for a right of way on public land, and there is already access to the mine, the private purpose is less relevant to this project. The fuel savings and other benefits from this project should be balanced with its economic and environmental costs and impacts.

The documented economic costs of the road appear to range from $6.1 million (Alt. B plus passing lane on SR-10) to $14.1 million (Alt. D plus passing lane on SR-10). These road building costs seem conservative, and do not appear to take into account the costs of maintenance on the new road, the impacts to the livestock industry (not quantified in the DEIS), cultural impacts, habitat fragmentation (not discussed in the DEIS, but a major impact of roads to the ecosystem), riparian impacts, and visual/aesthetic impacts. The cost of mitigation for cultural and grazing issues alone could be substantial and are not clearly taken into account.

The benefits in terms of fuel cost savings appear to range from 1,194,667 gallons per year (Alt. D) to 1,507,556 gallons per year (Alt. C). Benefits also include improved access for the public to these public lands, minimal benefits to commuters from Emery County, an alternative route in case of emergencies, and the savings in costs of improvements on SR-10 (they range from $63,636 (Alt. D) to $918,181 (Alt. C) --SR-10 will need to be upgraded for the coal traffic no matter which alternative is selected. The savings comes in having to improve less of SR-10 with some of the alternatives because of the shortened trip).

It is not clear from this document whether the economic and environmental costs of this project outweigh the benefits. The document does not address how long the mine will be in operation. The fact that the mine has contracts extending out several years indicates that they do not need the road to maintain viability, but are interested in increasing their profit margin. The

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Response 397-2
The reference to FLPMA is noted under Alternative A; the FEIS discusses complications in maintaining the current road system under increased production and transport. See the discussion in Section 2.1 in the EIS (Alternative A -No Action) where it discusses the complications in maintaining the existing road system due to increased truck traffic, especially Acord Lakes Road and SR10. Periodic traffic congestion is expected on Acord Lakes Road if all the truck traffic has to use this road in the upcoming years of increased production at the SUFCO Mine.

Response 397-3
The costs for the road in the DEIS are construction costs; maintenance would be the responsibility of the county (SCSSD). The tolls from coal trucks would reimburse the SCSSD for all the costs of the road. The mitigation costs will not be known until the decision notice is issued detailing required mitigation but are estimated to be $0.4 to $0.6 million. The savings on transporting coal would easily pay for the road, road maintenance, and mitigation. The mine will operate 15-20 years on present known reserves but potential for additional reserves exists adjacent to the mine operating area.

The SUFCO Mine was Utah's largest coal producer in 2004. SUFCO and dependant trucking companies provided 20 percent of the non-farm employment and 28 percent of the personal income in Sevier County in 2002. The mine is an important component of local economies. The presence and stability of the SUFCO Mine, and the families that support it, guarantee a continued demand in both Sevier and Emery counties for bank loans, mortgages, utilities, and other goods and services. This adds to the economic stability of both counties.

The construction costs were supplied by Jones & DeMille Engineering. The maintenance costs were derived from the actual costs of maintaining the present coal transport road, the Acord Lakes Road. Table 2.6-1 in Chapter 2 includes costs to construct the proposed road and alternatives but the projected maintenance costs and BMP costs will be included in the FEIS.

The competitive bids to transport coal forces the trucking firms to use the most fuel-efficient truck. The SUFCO Mine has a very high efficiency rating far out producing other coal mines on a per unit of labor basis, see Section 2.1 Alternative A - No Action. The proposed road is at a lower elevation for most of its length than the Acord Lakes Road so generally it would be more likely to be open in the winter when the other roads are blocked by storms.

However, in an effort to lessen impacts additional mitigation measures will be incorporated into the FEIS as Applicant-Committed Environmental Protection Measures. The response 397-1also explains the economic benefits.

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document must explain better why it is the public's interest to grant a right-of-way for a road that will have significant environmental impacts.

397-3 cont.

To provide a clearer picture of the economic costs and benefits, we recommend that the DEIS provide information on how long the mine intends to be viable, the maintenance costs of the new road, and the costs of mitigating for impacts. We believe mitigation may be required for cultural, water quality, wetland, wildlife, and aesthetic/visual impacts, at a minimum. It is also unclear how much of the cost of this project the mine will pay back in tolls. Will the tolls cover the entire cost of the project, including maintenance costs, or are the County and Federal government picking up some of the costs?

397-4

For both legitimate public purposes, i.e., reducing fuel usage and allowing a second road for emergencies, there may be other alternatives that meet the purpose that do not involve building roads. For example, in section 2-21, there is a short discussion on conveyor systems to convey coal, but it is ruled out as economically infeasible. It would be useful to know how expensive the conveyor system might be, and whether there are any other options. There should be some discussion about ways SUFCO could cut costs, e.g., whether more efficient trucks are an option, efficiency techniques to reduce energy usage at the mine itself, which would serve the same purpose as building a new road. In terms of an emergency, the DEIS does not explain what this entails. Would helicopters work in an emergency? Is the need to rescue miners from underground shafts, and if so, how would emergency crews get there faster from one of these alternate routes, or is there a better option? Where would they be coming from? Why is the one existing road not adequate for emergencies? How often is I-70 completely closed in this area for weather or accidents necessitating the need for an alternate route? Information answering these questions would be helpful in assessing whether there are other alternatives to meet this purpose, and whether this is a legitimate purpose.

397-5

Cultural Impacts

The impacts to cultural resources appear to be major for all the alternatives except the no action alternative for this project. There appears to be no mitigation plan for preserving the rock art or any sites eligible for the National Register of Historic Places, and no obvious resolution with the Paiutes, who have expressed opposition to any project along Quitchupah Creek because human activity could impact the sacredness of the canyon. We suggest that if any of the build alternatives are considered, a mitigation plan needs to be developed far in advance for discussion so that all parties can consider the costs and time involved in mitigating for the cultural impacts of this project.

397-6

Water Quality

Downstream of the project area and upstream of its confluence with Ivie Creek, Quitchupah Creek is listed on Utah's 303(d) list as a total dissolved solids (TDS) limited stream segment. It appears quite likely that Alternatives A and B would contribute to the water quality

Response 397-3 cont.
Savings to SUFCO relate directly to long-term economic resilience of Sevier County. Many environmental protection measures (See Chapter 2 Alternatives) and mitigation measures (See resource sections in Chapter 3 of EIS) have been incorporated to reduce, minimize, and compensate for environmental impacts.

Response 397-4
Other alternatives to reduce fuel consumption may include a slurry line or other means of transport such as available. However, due to the remote and rugged location of this mine, trucking coal to loadouts is the simplest method of transportation. The conveyor and slurry systems require water in quantities that are not available and also are not feasible due to engineering constraints of the terrain indicating they are not economically feasible.

The SUFCO Mine has a very high efficiency rating far out producing other coal mines on a per unit of labor basis, see Section 2.1 Alternative A - No Action. It is outside the scope of this project to analyze efficiency techniques to reduce energy usage at the mine itself in comparison with reducing fuel and time costs to deliver coal.

I-70 has never been closed for a 24 period of time during the last 30 years (Washburn, 2002); the interstate has been closed for about 1-4 hours at a time during white-out snow conditions. Accidents along I-70 generally close the highway for no more than four hours at a time (Washburn, 2002). An additional transportation route is not the purpose of this project but rather a shorter route that provides cost savings.

Response 397-5
Alternative D avoids all known cultural resource sites near that route; therefore, there are no direct impacts to sites if that route is chosen. Due to the confines of the canyon, there are some cultural resource sites that could not be avoided along Alternatives B and C. Alternatives B and C have been rerouted in the area of the rock art in order to avoid direct impacts to it. Secondary impacts could still occur. The applicant-committed measures in Chapter 2 of the FEIS include processes to reduce or eliminate impacts to eligible cultural resources. Specific cultural mitigation is dependent on which alternative is chosen but may include avoidance, data recovery, intensive recordation/mapping, historic research, oral interviews, and/or public exhibits and education. After the ROD is issued, a site specific Mitigation Plan would be completed for the chosen alternative. The Mitigation Plan would have to be approved by the SHPO, the administering land agency, and consulting parties; a Memorandum of Agreement (MOA) would also be completed between the agencies and consulting parties. The tribes have been asked and accepted consulting party status. Consultation and resolution with the tribes is on-going. An ethnographic study was conducted with the Paiute Tribe (Stoffle 2004) and summarized in Section 3.13 of the EIS. The Quitchupah Creek canyon possesses sacred values for the Paiute Tribe.

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397-6 cont.

problem downstream, and it is possible that Alternative D would also contribute, but less so. Although it is stated in section 3.4 that an improved road design will slightly decrease sedimentation and salinity into the drainages from the existing environment, there is no data provided in support of that conclusion. We suggest more information on how the new road design would improve the situation. The existing unpaved jeep trail likely contributes to the TDS problem, as well as natural erosion, drainage from the mine and riparian area impacts from livestock. All of these should be evaluated to see where improvements can be made.

In addition, there is no information in the DEIS on whether the road will be sanded or chemicals used during the winter months as normal winter maintenance. Sand and chemicals will contribute to the impairment of the stream. Unless the existing jeep trail is taken out, it will still contribute to the problem, and the DEIS does not specifically say that it will be taken out. If the jeep trail will be coming out, please explain whether ATVs or mountain bikes are likely to make spur trails on their own in the area, in which case the problem of erosion and sedimentation from jeep trails persists. Please address whether this is an issue, and whether the existing jeep trail will be closed under each of the build alternatives.

397-6 cont.

EPA feels strongly that any action taken in this area should not further contribute to the TDS problem, and in fact the State of Utah has as a goal restoring the beneficial uses of all impaired water bodies. We suggest that in addition to best management practices taken during construction, which are mentioned in the document and all look appropriate, mitigation be taken to improve the problem in the 303(d) listed stream segment. Actions such as monitoring to assess the mine's contribution to the problem and addressing that, addressing grazing and instream cattle watering in proximity of the stream, using best management practices to control erosion while building and maintaining the road, as well as removing the existing jeep trail and stabilizing soils, no matter which alternative is selected, should be addressed. Any permit required for stream realignment should require these improvements. We suggest that at a minimum, SUFCO conduct a sediment analysis to see how much the mine is contributing to the problem.

It is not clear from the discussion what the state of the water was in this area, prior to mining. It is stated that Quitchupah Creek receives a significant amount of flow from mine discharges, but nowhere does it say what the impacts from those discharges might be or whether this project will or will not exacerbate these impacts.

Noise

397-7

The DEIS states that the increase in noise levels will affect wildlife, but there is no analysis of the impacts on wildlife, and no mitigation measures proposed for the impacts. This should be addressed in much greater detail.

Air Quality

397-8

The air quality analysis appears insufficient and makes no mention of the effect the change

Response 397-6
The final EIS has been revised to include a more extensive description of the BMPs associated with the proposed road design, construction, and maintenance. Further, it has been revised to include details on applicant-committed and agency-committed measures, which are intended to help minimize sediment/salinity impacts. Lastly, the EIS has incorporated an extensive monitoring plan which would ensure that chronic sedimentation/erosion sources associated with the road project are addressed, and that water quality goals are met. All of these measures combined would minimize the potential for increasing the amount of total dissolved solids in Quitchupah Creek above current levels, in spite of some localized areas of increased erosion due to increased areas of disturbance.

The final EIS has been revised to describe the potential impacts to Quitchupah Creek from using a sand/salt combination for winter deicing. These impacts would be minimized through the use of several specific BMPs, also included in the final EIS.

The final EIS has clarified the fact that under Alternatives B and C, most of the existing jeep road would be covered over by the new road alignment, or reclaimed. Very little of the existing road would remain, as shown in the EIS. Under Alternative D, most of the existing road would remain as is and subject to use, however the applicant has committed to installing and maintaining water bars on the existing road to provide a measure of runoff control.

As described in Section 3.3 of the EIS, the existing mine drainage from the SUFCO mine is permitted under the UPDES wastewater discharge program and is generally of better quality in regard to TDS that the receiving waters to which it discharges. The final EIS has an added discussion on this issue. Rehabilitating 303(d) waters is outside the scope of this proposal. BMPs, environmental protection measures, and mitigation will contribute to the overall improvement of the 303(d) sections of Quitchupah Creek.

Response 397-7
The impact analysis for noise and wildlife appears in the FEIS. See Response 411-5.

Response 397-8
There will be no air quality impacts under any of the build alternatives (See Section 3.1).

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397-8 cont.

in air quality will have on wildlife in the vicinity of the new road. While it states that the net change in air emissions will decrease, it does not analyze effectively what the impact of the increase in air emissions in the vicinity of the action alternatives will be on wildlife and vegetation. The air emissions will increase over what there is today in the vicinity of the three action alternatives. In addition, since the project area is not that far from Class 1 areas (national parks), the air quality discussion should address visibility and haze issues in the area.

Cumulative Impacts

397-9

Information on the overall picture of the ecosystem in which this project is located would be helpful. A paragraph or two (not overloading the reader with detail) on what is happening to the Wasatch Plateau, and maybe the Colorado Plateau, and the Colorado River would be useful to put the impacts of this project in perspective. The impacts to resources from one small project may look insignificant, but when placed in the context of the region and other actions, the big picture clarifies what is happening to a resource. The overall impacts this project would have in the region is not something this document makes clear. In addition, assessment of the environmental impacts of a road in a largely undisturbed natural ecosystem should be done by placing it in the context of an ecosystem approach.

Although there are several mentions of cumulative impacts in the document, it does not appear that they have been analyzed sufficiently. We suggest that a list of past, present and future actions be included, and information on the temporal boundaries be discussed for each resource, and why the boundary was chosen. There is some information on the geographic boundaries in section 2.7, but no reason given for those boundaries. The section of the Quitchupah Creek watershed selected as the geographic boundary for addressing cumulative impacts might be fine, but the reasons for its selection should be explained. Why is that boundary sufficient, for example, for threatened and endangered species? A sufficient analysis may require looking at a species' entire habitat area. The cumulative impacts discussion on water resources should at least include the mine and its impacts, and start with whatever we know of the quality of the water before mining began here. The document should also discuss the cumulative impacts of hunting, particularly the impact in the future with increased access for hunters, as well as the impacts of grazing, the potential for future gas drilling in the area and coal bed methane, and the increased production of coal.

Indirect impacts also need to be documented, and separated from direct and cumulative impacts.

Habitat Fragmentation

397-10

In general, the fragmentation of habitats caused by roads is often severe. Transportation routes can be described as "disturbance corridors" that disrupt the natural, more homogeneous landscape. These disturbances can include physical disruption to the continuous vegetative community; disruption to the structure and function of habitat; and impacts to resident wildlife

Response 397-9

A general description of land use on the Wasatch Plateau and Muddy Creek drainage of the Colorado River has been inserted in Section 2.8 of the FEIS. The boundaries of the cumulative effects area coincide with the rugged physical boundaries of the watershed which naturally limit human activities and their effects. These boundaries serve as a general guideline as specific cumulative effects are discussed by the natural and man-made limits unique to that resource. As indicated in Appendix D, the actions are fairly limited for the cumulative effects area, as there are a lack of agency or other development actions planned for the future. The cumulative analysis has been revised for each resource in the FEIS. The rationale for the cumulative effects analysis areas is explained in the specialist reports included in the project record.

Response 397-10

We have reviewed the EPA document on highway development and refer to it in the revisions of some of the sections in the FEIS to better reflect the barrier and fragmentation potential of the proposed road. The revision is in the context that due to the poor quality of soils in the project area and the sparseness of the vegetation most of the habitats would be classified as low quality. The revision discusses the effects of noise in confined sites, the frequency of truck traffic, the human activity, and the physical barrier the road may be in the ecosystem.

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397-10 cont

which must negotiate, tolerate and cope with the habitat barriers. Specifically, coal trucks coming down at 3-minute intervals on a paved road provide such a disturbance, and should be evaluated in this EIS. Although this is not a highway, a good reference document for this type of analysis is "*Evaluation of Ecological Impacts from Highway Development*," EPA document, April 1994 (enclosed).

Fisheries

397-11

Given that the DEIS states that the aquatic community is under stress and that the macroinvertebrate community indicates the poor condition of the aquatic ecosystem of Quitchupah Creek (section 3.8), and information we have that a new species of insect was found in this drainage, we request that a complete, long-term (e.g., more than one sample) biological inventory be conducted in this area prior to any impact occurring. The studies should be designed and conducted by qualified biologists, experienced in the local ecological communities.

The document should address whether the FishLake National Forest has a forest standard for aquatic habitat capability. Typically Forest standards require 60-75% of availability habitat capability be maintained. It would be helpful to know whether the road project plus cumulative actions would cause an exeedence of available habitat capability.

Threatened and Endangered Species

397-12

There is insufficient information to determine whether the biological assessment is adequate. For example, for the Wright Fishhook Cactus, the field survey was done in May, but we have no information on whether that is when the species flowers, making it easier to detect. For the Last Chance Townsendia, it is stated that flowering occurs in April and May, but the survey was done in June of 2000. Why? For the Mexican Spotted Owl, no information is given on why it is not "expected to occur" in the general vicinity of the project (and what does general vicinity mean?). We suggest that more information from the FWS Biological Assessment be placed in this document.

Visual Resources

397-13

It appears that the aesthetic qualities of the canyon will be altered forever. We suggest more specific information on reclaiming acres that will be disturbed. Information on whether native species will be planted and the area returned to as natural a setting as possible would be advisable as mitigation for visual impacts.

In addition, it appears that a significant amount of fill and blasting will occur for Alternative D, which was analyzed thoroughly in the attachment. It would be helpful to identify places where bridges or culverts might not be a better practice both from an ecological and an aesthetic viewpoint.

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Response 397-11
Qualified biologists re-sampled Quitchupah Creek in 2002 for macroinvertebrates. On-going monitoring of macroinvertebrates is not part of the scope for this Project. There was little difference between previous sampling and sampling in 2000.

See Section 3.7 Fisheries and Aquatic Resources in the FEIS. The aquatic insects captured at Station Quitch-04 are rare, but these are not new species. This project complies with the Fishlake National Forest LRMP standards for the management area and aquatic wildlife monitoring.

Response 397-12
The additional information in the BA is included in the FEIS that details the survey methods and results, and clarifies the status of Northern Spotted Owl in the project area. The information on MIS species is included in the Wildlife Technical Report. USFWS has concurred with the determinations found in the BA.

Response 397-13
In Section 2.2, the reclamation plan is explained and two seed mixes are included, one for the higher elevations and one for the lower elevation saline soils. The seed mixes are agency specified and include native species. The acres to be reclaimed for each build alternative are included in this section of the FEIS.

Some of the terrain along Alternative D, Water Hollow, is so dissected by ephemeral drainages that even with bridges, cut and fill would be needed. A few bridges have been proposed as wildlife mitigation on Alternative D, in consultation with DWR to determine the best locations.

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397-14

Environmental Justice

It appears that many in the agricultural community in these counties may be affected by the additional cost of trucking livestock from areas they now graze, as well as the anticipated road collisions of livestock with vehicles. These impacts should be analyzed and quantified. Information on the ranching community and how it will be affected by this project should be included in this document.

397-15

Consultation on 404

The DEIS states that 404 issues (wetlands, aquatic life and stream alteration) will be addressed later, once an alternative is selected. EPA recommends strongly that the 404 issues, particularly as they relate to impact avoidance through alignment modification, should be addressed prior to the ROD. There are many benefits to including information to support both the DEIS requirements and the CWA section 404 requirements in the same NEPA process in order to disclose all direct, indirect, and cumulative impacts to aquatic ecosystems, as well as to bring avoidance, minimization, and mitigation requirements (i.e., section 404 CWA requirements) early and consistently through the process. Should the USFS and BLM proceed with this project without the necessary information that the Corps and EPA require for full disclosure of wetlands impacts, the Corps may be faced with a decision to supplement the NEPA document which may result in additional costs and delays.

397-16

Mitigation

Mitigation for this project is extremely sparse. Impacts from the action alternatives appear to be significant and mitigation may be appropriate for cultural, water quality, wetlands, wildlife and aesthetic/visual impacts, at a minimum.

397-17

Connected Actions

There are several connected actions that should be discussed and evaluated in this DEIS. SR-10 has to be upgraded because of the increased coal traffic whether or not an action alternative is selected. It is a connected action, and should be discussed and evaluated in this DEIS. If our analysis is incorrect and it is not a connected action, it nonetheless should be discussed as a project in the cumulative impacts section. Widening bridges, repaving 20 miles of road and adding passing lanes are major actions that should be evaluated. In addition, any alternate jeep or ATV trails the USFS or BLM might put in to replace the jeep trail on Quitchupah Creek should be evaluated as either a connected action or in the cumulative effects section. It may be reasonably foreseeable that other ATV trails would materialize in the area, given increased public access to USFS and BLM lands.

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Response 397-14
No low income or minority populations have been identified in the Project Area; there are no environmental justice impacts.

Approximately 1.5 miles of fenced cattle trail would be constructed along the western end of the proposed road, where topography constraints limit free trailing outside the road corridor (See Sections 2.2, 2.3, and 2.4 and Section 3.8). A few selected underpassess would be constructed so cattle could move within the allotments for grazing and watering as planned in Alternative C.

The fall drift of cattle down East Spring Canyon would allow the cattle to move down Convulsion Canyon to Quitchupah Creek or be gathered at the east boundary fence. Cattle drifting down Broad Hollow would enter a gathering facility located on the north side of Accord Lakes Road then be trailed down Convulsion Canyon utilizing the fenced cattle trail. The SUFCO Mine would provide water when cattle are present in the holding corrals.

Response 397-15
The FEIS contains a full disclosure of impacts and mitigation for regulated waters. The mitigation will also be included as part of Chapter 2. The mitigation design for wetlands and riparian zones would meet of exceed a 3:1 replacement ratio and accommodate function and values needs as defined by the COE.

Response 397-16
Applicant committed measures for the resources including cultural, water quality, wetlands, wildlife, and visual, is included as design features which have been added as part of Chapter 2. Specific cultural mitigation is dependant on which alternative is chosen but may include data recovery, intensive recordation/mapping, historic research, oral interviews, and/or public exhibit s and education. The mitigation required would compensate, reduce, or eliminate impacts to eligible cultural resources. After the ROD is issued, a site specific Mitigation Plan would be completed for the chosen alternative.

Response 397-17
The upgrade of SR-10 will occur because it is a substandard road and coal truck traffic will use it regardless of the alternative selected. The Alternative B, C, and D junctions with SR-10 and the needed modifications, such as additional lanes and bridge expansion, are discussed in the FEIS. There are no plans to include an ATV trail in Quitchupah Creek by either agency.

Letter #411

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
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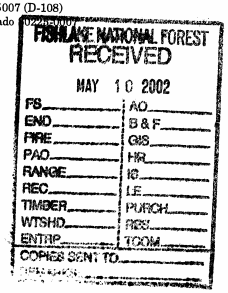

May 7, 2002

ER 02/261

Mary C. Erickson
Forest Supervisor
Fishlake National Forest
115 East 900 North
Richfield, Utah 84701

Dear Ms. Erickson:

The Department of the Interior (DOI) has reviewed the Quitchupah Creek Road Draft Environmental Impact Statement (DEIS), and offers the following comments.

The document analyzes four alternatives:

- Alternative A - The No Action Alternative. Trucks would continue to travel the existing route via the Acord Lakes Road to I-70, then SR-10.
- Alternative B - The Proposed Action. Quitchupah Creek Road would be realigned and 9.2 miles of an existing road/trail would be converted to a paved road. There would be a steep grade ascent on SR-10. Disturbance by the footprint of the road corridor would be 88.4 acres, 17.4 acres temporarily, and 45 acres permanently.
- Alternative C - Alternate Junction with SR-10 and Alternate Design. Disturbance by the footprint of the road corridor would be 104.8 acres. Five livestock/game underpasses approximately 20 feet wide and 70 feet long, plus 16.3 miles of fencing would be incorporated into the design along Quitchupah Creek. Two other underpasses would be added, one under the existing Acord Lake Road and a second at Broad Hollow to facilitate spring and fall trailing.
- Alternative D - Water Hollow Alignment. Disturbance by the footprint of the road corridor would be 155.4 acres. This Alternative would leave Quitchupah Creek road after 2.0 miles and follow an existing jeep trail across Water Hollow Benches and then Salteratus Benches. It would require 9 crossings of perennial and ephemeral drainages that are tributary to Quitchupah Creek.

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Letter #411

General Comments:

411-1

Consultation with the U.S. Fish and Wildlife Service (FWS) under section 7 of the Endangered Species Act (ESA) of 1973, 16 U.S.C. § 1536 has not been completed for this project, but is ongoing. We expect that this consultation will be completed prior to publication of the Final Environmental Impact Statement (FEIS) and the results of the consultation will be addressed in that document.

The analysis of impacts is somewhat general, which makes determination of significance difficult. The significance of impacts can only be determined through addition of context such as site-specific quantification of impacts and comparison of those impacts to conditions on a local, regional or national level. We believe that the analysis of habitat loss, road effects (direct mortality, habitat fragmentation, noise, long-term impacts), air and water quality, blasting disturbance, impacts to raptors, and cumulative effects from this proposal should be modified and expanded. Our concerns are presented in the following paragraphs.

Habitat Loss:

411-2

All the action alternatives would open extensive fish and wildlife habitat along the right-of-way and in the surrounding area to disturbance that is a marked departure from previous practice, and yet little mitigation is offered for this loss of habitat and habitat value. According to the document, between 45 and 54 acres of permanent disturbance to vegetation would occur from direct impacts (page 3-54, Irreversible or Irretrievable Commitment of Resources and Residual Adverse Impacts). Although 2.75 acres of 3.3 lost riparian vegetation would be restored in conjunction with Threatened and Endangered Species mitigation, there is no mitigation proposed for the remaining 0.55 acres. While riparian areas in Utah comprise only approximately 2% of the land, they provide essential habitat for approximately 70% of wildlife at some time in their life history, and any loss is significant. Additionally, we could find no mitigation offered for the loss of 60-70 acres of upland vegetation that the document states would not be reclaimed post-project. Depending on the alternative, approximately 73 acres of greasewood, 0.5 acre of Douglas-fir woodland, 25-44 acres of mountain brush, 1-85 acres of pinyon-juniper, or 23 acres of low shrub vegetation would be disturbed. The document does not specify the amount of reclamation by vegetation type. A significant loss of one vegetation type more than others may lead to a localized ecosystem shift and impacts to associated wildlife species. As noted in the document (page 3-56), the vegetation types within the project area provide habitats for many species of birds. Several neo-tropical migratory birds protected by the Migratory Bird Treaty Act (MBTA)(16 U.S.C. §703-712) and on the Partners in Flight Priority Species List may inhabit or migrate through the project area. Species utilizing pinyon-juniper include: gray vireo and Pinyon jay. Species which may utilize shrub habitats include: Virginia's warbler and sage sparrow. Therefore, we recommend that the FEIS: (1) specify how much of which vegetation type you will attempt to reclaim; (2) note what proportion of each vegetation type will be lost from the immediate system; and (3) develop mitigation for the loss of each type. Mitigation considerations include: restoration or replacement of lost habitat type to the extent practicable and where appropriate;

Response 411-1
Consultation with the U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act was completed. USFWS has concurred with the determinations found in the BA (Appendix G). The subspecies of the southwest willow flycatcher in the project area is not the subspecies listed on the T&E species list.

Response 411-2
Applicant committed measures and mitigation measures would mitigate for the loss of wetlands and riparian zones. See Sections 2.2, 2.3, 2.4, and 3.5 in the FEIS for discussions on applicant committed measures and mitigation which include revegetation with native species. Applicant Committed measures include fencing of 4.7 miles of the riparian area to limit where livestock can water in the stream.

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411-2 cont.

restoration efforts will not prioritize habitat suitable for grazing at the cost of habitat for neo-tropical migratory birds; revegetation with native species to the extent practicable; a vigorous invasive weed program; and monitoring to determine efficacy of mitigation, with a commitment to redress insufficiencies.

411-3

A common error in the analysis of impacts to wildlife is the assumption that displaced wildlife will easily find forage, nesting and breeding habitat elsewhere. There is no analysis of: whether or not suitable alternative habitat is located within the range of displaced wildlife species; whether or not the habitat will already be occupied by competing individuals of its species or other species; if occupied, is the habitat capable of sustaining the increased numbers. It is just as likely that some or a significant portion of the displaced wildlife will suffer mortality or decreased reproductive ability.

Road Effects:

411-4

The impact analysis is substantially confined to the footprint of the road. Indirect impacts are cursorily mentioned in the DEIS as including barriers to wildlife movement and mortality from road kills, but are not fully explored. The document states that this road will experience one coal truck per every three minutes, and that increased mortality from vehicle collisions would likely occur. The significance of this impact cannot be determined because the analysis does not include numerical estimates. We believe the frequency of vehicle traffic from the proposed use of coal trucks along with increased public use of the road would result in significant loss of wildlife to vehicle collisions. Numerous studies have demonstrated the relationships between road types, traffic densities, and corresponding levels of road-kill wildlife for various species. Effects of wildlife road-kill can extend far beyond the effects to individual wildlife, with serious consequences to the population level of many wildlife species (Evink et. al, 1996, 1998, 1999). The FEIS should address this concern.

411-5

Other significant indirect impacts such as loss of habitat value, habitat fragmentation, disturbance from increased traffic and noise, harm to bald eagles that may feed on dead animals along the road and long term impacts to species populations are alluded to, but not analyzed. This road would make the area within the Quitchupah drainage more accessible to the public, but little if any analysis is done on the impact of public access on fuels, fire occurrence, sanitation, wildlife, aquatic species etc. Also, the noise discussion mentions an effect to wildlife, but it does not carry the subject forward for more analysis. This is an especially crucial omission in the areas where the road passes between narrow canyon walls where noise effects will be magnified. Even short term impacts are not discussed with any detail in the DEIS, yet there is a body of literature which would allow some prediction of potential results of highway construction and operation. We offer some examples in the following paragraphs.

Findlay and Bourdages (unpubl. rep., 1998) speculate that the full effects of road construction on birds and herptiles may not be realized for decades. Generally, habitat fragmentation and barrier effects of linear corridors can reduce usable ranges of wide-ranging habitat generalists and create

Response 411-3
EPA document on highway development has been reviewed and incorporated in Section 3.5 of the FEIS to better reflect the barrier and fragmentation potential of the proposed road. Due to the poor quality of soils in the project area and the sparseness of the vegetation, most of the habitats would be classified as low quality. Section 3.5 discusses the effects of noise in confined sites, the frequency of truck traffic, the human activity, and the physical barrier the road may be in the ecosystem.

Response 411-4
Impacts to wildlife species from vehicle collisions are included in the FEIS. The relationship between the proposed road type and traffic densities on wildlife populations is evaluated in Chapter 3 of the FEIS. Mitigation includes the fencing of the road. Applicant committed measures include underpasses and/or bridges for wildlife movement.

Response 411-5
See response 411-3.

Ambient or background noise levels along the proposed haul road and SR10 are typical for outdoor and rural locations. As stated in the DEIS, additional noise from construction and coal truck activity associated with the proposed action will impact area near the road. Noise levels of outdoor and rural areas of 35 and 56 dBA were measured in the Quitchupah Creek area and Emery Town, respectfully. Current noise levels in Emery Town would not increase as a result of the proposed road since the haul truck numbers and frequency would not increase.

Noise pollution=s effects on wildlife is not well studied, but recent research from the U.S. Air Force and U.S. Department of the Interior, relates given noise levels to the effects on certain types of animals. The most relevant published noise effects on animals are listed below:

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411-5 cont.

411-5 cont.

411-6a

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genetic isolation in populations of smaller, less mobile species (Harris 1988, Reh and Seiz 1990). The less mobile species tend to have specific habitat requirements and may derive all of their resource requirements from a single wetland or habitat type. Different classes of wildlife have varying needs to move between habitats. For instance, amphibian life cycles require migration between habitats with different ecological properties. Highways were shown to exhibit a significant barrier effect to populations of the common frog within 1.5-2.5 miles of the road (Reh and Seiz 1990) as well as to populations of rodents, arthropods, and beetles (Kozel and Fleharty 1979, Mader 1984, Mader et al. 1990).

The extent of the barrier effect may be determined to some extent by the right-of-way vegetation and its similarity or dissimilarity to the natural vegetation of the local area (Wilkins 1982). Habitat changes could encourage establishment of competitors or predators more adept at living in human-altered environments, such as starlings, brown-headed cowbirds, and raccoons (Harris 1988).

Studies have indicated that wildlife are disturbed over surprisingly long distances from rural roads and highway corridors. Disturbance to wildlife has generally been inferred from relative densities of a species or group of animals at varying distances from a road. For instance, Van der Zande et al. (1980) confirmed earlier conclusions of Veen (1973) and showed that lapwings and godwits were disturbed to distances up to 1.24 miles from a highway located in the Netherlands. Similarly, plant, bird, and herptile species richness was observed to diminish with increasing density of paved roads, out to a distance of again at least 1.24 miles from the road (Findlay and Houlahan 1996). Based on their statistical models, a 2m/ha increase in total paved road density was assumed to have the same impact on herptile and mammal species richness as the loss of 50% of the wetland proper. In forested habitats, road noise reduced bird population density and breeding success within 0.3 to 0.6 miles of roadways. Breeding dispersal patterns were indicative that roadside areas provided lower quality habitats (Reijnen and Foppen 1994, Foppen and Reijnen 1994, Reijnen et al. 1995). While highway right-of-ways can certainly create habitats for some species and consequently increase their densities adjacent to the road corridor (Adams and Geis 1983, Clark and Karr 1979), this potential benefit should be evaluated in context with indications that right-of-way corridors can also facilitate the movement of diseases, predators, exotic wildlife species, noxious weeds, and fire (Mann and Plummer 1995).

Thus, the DEIS does not adequately address potential indirect impacts of the highway as they relate to wildlife disturbance and subsequent potential effects to populations since the analysis is confined to a relatively narrow study corridor and does not provide context in terms of local and regional impacts. We recommend the FEIS address the potential indirect impacts and, depending on the level of impact, develop suitable mitigation.

Cultural Resources:

Our first comment is regarding the eligibility status of both Convulsion Canyon and Quitchupah Creek for the National Register of Historic Places as Traditional Cultural Properties (TCP's).

Documented Sound Levels on Animals

Noise Source	Noise Level	Subjective Description
Pronghorn	77 dBA	Escape and Running
Various Species	132 dBA	Anxiety-like behavior
Rats, rodents	105 dBA (continuous)	
	95 dBA	Hearing loss; Suppressed thyroid activity
Mouse	110 dBA (intermittent noise)	decreased in circulating eosinophils; adrenal activation
	105 dB (continuous)	longer time intervals between litters; miscarriages, lower weight gain

While none of these limited studies relate directly to the study area, pronghorn behavior with 77 dBA are directly affected by noise levels of that magnitude. Similar results can be assumed to occur for large game animals indigenous to the canyon area.

Noise levels will likely double 200 meters away, where haul truck noise is allowed to dissipate in all directions. An increase in these predicted levels would be experienced if noise is prohibited from dissipating such as having a canyon wall immediately to one side of the haul road. See section 3.5 of the FEIS.

Response 411-6a

Consultation with the Paiute, Hopi, and Ute tribes is on-going. The Paiute and Ute tribes accepted consulting party status and would participate in any agreement to resolve adverse effects to Native American Concerns and cultural resources. The Paiute tribe has claimed the area to be a sacred site. An ethnographic study was conducted (Stoffle et al. 2004) with the Paiute Tribe of Utah. No Traditional Cultural Properties (as defined in the NHPA) have been nominated in the Project Area but Quitchupah Creek canyon does contain values sacred to the Paiute Tribe (EO13007). See Section 3.13 of the FEIS for a summary of the findings of the ethnographic study.

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411-6a cont.

Has a formal determination of eligibility been made by the two agencies? Either way, we would encourage the Agencies to continue to consult with those Indian Tribes that attach religious or cultural significance to the subject locations.

We have had communications with the Ute Tribe, Paiute Indian Tribe of Utah, and the Hopi Tribe and they have expressed concerns regarding the construction of the Quitchupah Creek road project and public access to petroglyphs (i.e. rock art sites) and other significant archeological sites in the area. The three Tribes are concerned that the various cultural resources would be impacted and that an alternate route should be implemented that avoids Quitchupah Creek. This is also addressed in Chapter 3.14 Native American Religious Concerns as documented in the DEIS.

In all the alternatives, with the exception of the No Action alternative, it seems possible that a determination of adverse effect pursuant to 36 CFR 800.5 will be made by the Agency Official regarding Convulsion Canyon and Quitchupah Creek as TCP's. Should this situation arise, we would suggest that the Agencies invite the Tribes to be Consulting Parties to any agreement to resolve the effects to the historic properties. Such agreement might involve closing the haul road during certain times of the year to accommodate an Indian Tribe's ceremonial or religious activities. We also would suggest the agreement, in consultation with the appropriate Indian Tribes, contemplate complete removal and reclamation of the proposed road once hauling ceases.

411-6b

As the Agencies proceed with evaluation of the proposed action, we also would encourage referral to Executive Orders 13175---*Consultation and Coordination with Indian Tribal Governments* (November 6, 2000), 13007---*Indian Sacred Sites* (May 24, 1996), and 12898—*Environmental Justice* (February 11, 1994) and Secretarial Order 3206 *American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act* (June 5, 1997).

We agree with the Tribes' concerns regarding the proposed action and recommend that the Agencies continue to consult with the Tribes to resolve any outstanding issues.

411-7

Cumulative Effects:

The cumulative effects discussions of all the action alternatives are incomplete. They mention but do not account for impacts from the increased traffic due to proposed oil and coal bed methane exploration and development. Discussion of Alternative B fails to mention that a request for a replacement ATV trail parallel to road has been made, which if constructed could result in even more loss of habitat and disturbance of wildlife. The analysis should explain how additional traffic would affect wildlife as well as all other resources in the area.

The analysis should present all lost habitat in units of area, such as acres rather than by linear foot. The use of linear foot measure is especially limiting to the discussion of stream and riparian habitat that may be impacted by relocation of streams.

Response 411-6a continued
The proposed Alternative B, Quitchupah Creek Road, and Alternative C, Alternate Junction, route near the rock art sites has been realigned and moved to the other side of the creek. This reroute would place the road about 300 feet away from the rock art panels and the creek would be a physical barrier between them, making it more difficult to access the petroglyphs. The new alignment would also avoid impacting known cultural sites located within the previous alignment.

The existing road that currently is routed between the creek and the panels would not be used for access. This would tend to limit access for casual visitors.

This modification to Alternatives B&C would preclude the direct impacts of a busy public road next to the rock art.

Response 411-6b
Executive Orders 13175 --- *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000) applies to developing federal regulations and is not applicable to the proposed road. 13007 --- *Indian Sacred Sites* (May 24, 1996) is part of the Native American Concerns analysis in Section 3.13. It was determined that no low-income or minority populations would be disproportionately impacted by the project (EO 12898 --- *Environmental Justice* (February 11, 1994)) as discussed in Section 3.15. The project area does not contain tribal lands nor is it subject to any treaty delineating rights or trust resources; therefore Secretarial Order 3206 *American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act* (June 5, 1997) is not applicable.

Response 411-7
The cumulative effects discussion has been revised and expanded. Neither an ATV nor a cattle trail are proposed; therefore there will be no additional impacts due to a trail. There is a paucity of proposed future actions to provide information on additional impacts.

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Maps

411-8

The Geology Map (Figure 3-1) and Soils Map (Figure 3-4) are inadequate. Neither provides the information needed to assess the geologic hazards inherent to this project. In addition, the random and non-standard scales of all the maps create confusion. The maps need to be of sufficient quality with standard scales in order to permit a reasonable scientific examination of the project.

Page-Specific Comments

411-9

Figure 1-2 does not include the No Action Alternative, giving the impression the decision has already been made. A footnote indicating that with No Action, none of the routes would be constructed should be added to the figure. Also, the scale of the map is not detailed enough to permit a careful comparison of the alternatives.

411-10

Page 1-10, *Threatened, Endangered, and Sensitive Species (TES)*: This section is inconsistent with the TES discussion beginning on page 3-67. For example, page 1-10 mentions a potential for seven T/E species occurring in the project area, while page 3-67 discusses twelve T/E species as having potential of occurring in the area. The two sections need to agree.

411-11

Page 2-4, *Alternatives Including the Proposed Action, Section Alternative A – No Action*: An economic justification is included in the discussion of the No Action alternative and the eliminated alternatives (page 2-21, 2.5); however, there is no economic appraisal in the text for Alternatives A, B, and C. The construction and maintenance costs of the four alternatives presented in Table 2.6-1 Comparison of Alternatives (Page 2-23 – 2-29) are uncorroborated. For example, maintenance costs for SR-10 are considered high because of the presence of Mancos shale-derived soils and yet no equivalent analysis was prepared for the possible shale soils and subsoils under the newly constructed Quitchupah Creek Road.

Supporting information is needed that explains all the factors analyzed for construction costs (page 2-23) and maintenance costs (page 2-29) presented in Table 2.6-1. Of concern are the costs associated with the Best Management Practices Report (page 3-7, Mitigation and Monitoring) that had not been developed during this NEPA process, and therefore, the costs are not included in Table 2.6-1.

The costs for construction and road maintenance need to address shale soils (buckling, warping, slumping, and offsetting of the road), engineered stabilization of mass wasting (soil creep, slump, and landslides including the large mapped landslide), engineered stabilization and prevention of rock fall, and sediment-runoff and debris-flow maintenance in culverts and on roads. Construction costs for widening the bridge in Alternative B, if chosen, to International Building Code (ICC 2000) seismic standards should also be included.

Response 411-8

The map scales were dictated by the format of t he document and the limit on overall map size. The Geology Map is the only one available for the area at this time. This map has been removed from the EIS as there will be no impacts to geology (See Section 3.1). Further, the soils map was created by available NRCS field inventories data that was provided ahead of the scheduled release of the official survey. Currently, the official survey for that area has not been published and there is no better official information than what is in the FEIS.

Response 411-9 and Response 411-10

Editorial changes have been made.

Response 411-11

The following information was developed for the DEIS but was not included at the agencies request. This information is included in Section 3.15 Socioeconomics of the FEIS. Although costs change over time, the overall trends remain.

Annual Haul Cost Savings

Year	Eastern Markets mmtpy	No. Of Hauls per year	Alt A savings per haul $0.00	Alt B savings per haul $75.25	Alt C savings per haul $79.76	Alt D savings per haul $63.21
2001	2.0	52,632	$0.00	$3,960,558	$4,197,283	$4,016,927
2002	2.5	78,947	$0.00	$4,950,698	$5,247,410	$4,138,586
2003 or max.	5.5	144,737	$0.00	$10,891,459	$11,544,223	$9,148,825

1. 1.0 mmtpy to Savage Loadout + 1.0 mmtpy to Hunter Plant in 2001, 3.1 mmtpy in 2002, 4.5 mmtpy or maximum in 2003
2. Mmtpy divided by 38 ton standard haul load
3. 0 miles less travel x $3.01/load/mile savings (based on industry cost of $0.07/ton/mile) = $0.00
4. 25.0 miles less travel loaded x $3.01/load/mile = $75.25 savings per load
5. 26.5 miles less travel loaded x $3.01/load/mile = $79.76 savings per load
6. 21.0 miles less travel loaded x $3.01/load/mile = $63.21 savings per load

The haul distance to Hunter Power Generating Plant from the SUFCO Mine is 62 miles, at a cost $0.07/mile/ton the cost for hauling one ton is $4.34(62 x $0.07 = $4.34). The average price for coal in 2001 is $17.54 per ton (Utah Mining Association reports, 2001), so the $4.34 hauling costs represents 25 percent of the value of a ton of coal in 2001. The proposed Quitchupah Creek Road would reduce the haul distance by 25 miles or by 40 percent, and the cost to haul one ton would be reduced by $1.75 or 10 percent of the value of the ton of coal.

		Response 411-11 continued The value of the proposed Quitchupah Creek Road to the SUFCO Mine is measured in the reduction in hauling costs and the reduced effort to haul coal. The 50+ miles less to travel means the round trip from the SUFCO Mine to the Hunter Generating Power Plant is reduced 40 percent, or from 124 miles round trip to 74 miles round trip. This would save about 75 minutes on the round trip. The cost to haul one ton of coal on the 62 mile loaded haul is 25 percent of the market value of a ton of coal in 2001. The 40 percent reduction in mileage would save 10 percent of the market value of a ton of coal, thus potentially increasing profits by 10 percent. The 10 percent savings for an annual haul of 2-4.5 mmtpy means a considerable cost advantage for the coal producer. For Alternative C, the cost advantage would increase to 10.5 percent. For Alternative D, the cost advantage would decrease to 8.4 percent. The costs were supplied by Jones & DeMille Engineering, the engineering design firm for the project. They will be cited in the FEIS. See Chapter 2 of FEIS under *Borrow Material Areas* for design feature that negates the affects of building on shale-affected soils. SR-10 does not have this feature which is the reason it will require a re-design of the highway to make it suitable for transporting heavy loads. The construction costs were supplied by Jones & DeMille Engineering. The maintenance costs were derived from the actual costs of maintaining the present coal transport road, the Acord Lakes Road. And will be included in the FEIS. Table 2.6-1 only includes cost to construct the proposed road and alternatives but the projected maintenance costs and BMP costs will be included in the FEIS. The shale soils are not projected to cause a problem for the proposed road due to design features that negate the affects of these soils (Chapter 2). The construction costs include the stabilization and drainage control features. An economic analysis was not produced but estimated costs are on file at the agency offices.

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411-12

Page 2-12, Table 2.2-3: The DEIS indicates that proposed vegetative reclamation of disturbed areas will occur through the application of a seed mixtures and mulch. However, the DEIS also mentions, repeatedly, that a significant environmental feature of the proposed Alternative B route is that soils throughout much of the watershed are highly erodible (page 3-22, Section 3.4 Water Resources, Stream Channel Descriptions, paragraph 7), especially along the creek bed. Furthermore, the Quitchupah Creek site seems to be a former habitat for the southwest willow flycatcher (page 1-10, Section 1.6 Issues, Threatened, Endangered, and Sensitive Species).

There are adequate supplies of native grasses and forb species available for revegetation purposes. The proposed seed mix contains very few native species. Yellow sweet clover should be eliminated from the mix because it will serve to attract wildlife to the disturbed area. Crested wheatgrass and Luna pubescent wheatgrass should also be eliminated unless it can be shown that native species cannot be reestablished on the site.

We suggest that native willow (*Salix*, perhaps *amygdaloides*, *caudata* or *exigua*) be considered as part of the reclamation mix identified in table 2.2-3. The deep roots of willow will help to stabilize wetland and riparian zones along the creek, and the mature plants will provide potential nesting habitat for the remnant Federally listed southwest willow flycatcher population. Planting with willow saplings rather than seeds would facilitate plant maturation and provide some erosion protection for seeds sown as mentioned in tables 2.2-3 and 2.2-4.

411-13a

Page 3-3, *Topography, Geology, And Minerals*: Faulting and fracturing are mentioned in the second paragraph on this page, but no seismic hazard evaluation is included in the DEIS. Figure 3-1, Geology Map, appears to show that the road will be crossing mapped faults and that mapped faults are in close proximity to the SR-10 bridge that will be widened. The FEIS should include an analysis of and mitigation plan for the impacts of these mapped faults on the proposed road and bridge. The bridge will be built on alluvium, and therefore, liquefaction hazards should also be examined. A seismic event can trigger landslides and other mass-wasting events and thus should be included in the landslide review (see below).

411-13b

Page 3-4, *Landslide Review*: The analysis of mass wasting (landslides, soil creep, slumps, and mass movement) and rock fall is insufficient. Considerable construction activity, which includes extensive blasting and a proposed staging area (Appendix B; Quitchupah Creek Road Alignment Plan and Profile, Strip Map1), will take place at the toe of the mapped landslide, potentially endangering its stability. The statement, "this landslide appears to be inactive and poses no threat to the proposed haul road route," is not substantiated in the DEIS.

411-13c

The alignment of the road, with the corresponding blasting, blading, and normal construction activities, through geologic strata that are prone to "slumping, soil creep, and rock fall" enhance the mass-wasting hazard, present and future, to this project. This hazard not only causes expensive long-term maintenance costs but also considerable safety concerns, especially to the increased traffic of recreationists that the new paved road will bring. A detailed study of the areas of mass wasting and rock fall and a comprehensive mitigation plan that includes engineered

Response 411-12
Native species, in agency specified seed mixes, would be used in reseeding (Section 3.4). Willow plantings could be used adjacent to the creek where disturbance might occur due to stabilization of fill slopes or fill at crossings but willow plantings would not survive outside the riparian zone due to xeric conditions. The subspecies of southwest willow flycatcher in the Project Area is not the listed subspecies (See Section 3.7).

Response 411-13a
The proposed Quitchupah Creek Road project and alternatives lie within a IIb seismic region (UBC, 1997) extending from the Arizona border with Mexico up to the Canadian Border. About 12 earthquake epicenters capable of damaging structures (greater than 5.0 on the Richter Scale) have occurred in this seismic region from 1884-2001 (UUSC, 2002). Earth quake activity in the near-future would probably be similar to those observed in the past 100 years. Additional information is provided in Section 2.5 of the FEIS.

Response 411-13b
Liquefaction is a hazard whenever a structure is constructed on unconsolidated sedimentary deposits in an area that has the potential of seismic activity. The engineering design of the road will take into account that portions of this road and the SR-10 bridge will be built on these deposits.

The discussion in Section 3.1 of the FEIS clearly states that the landslide feature is not within the proposed road corridor and that the Acord Lakes Road intersects the toe of the mapped landslide feature. The Acord Lakes Road does not indicate movement or topple on the mapped landslide; thus, indicating some stability.

The maintenance costs from the Acord Lakes Road, which traverses similar terrain and formations, will provide an indication of relative maintenance costs for the proposed road. Many public and private roads and highways have been built on the Wasatch Plateau in similar geologic formations, and much experience has been gained from the construction and maintenance of these roads. See Appendix B for design features to deal with steep slopes and rock fall.

Response 411-13c
The geologic formations in the project area are prone to the mass wasting processes of slumping, rockfall/topple, and soil creep. Engineered solutions will be designed and implemented to help stabilize the unstable areas and will be incorporated into the final design.

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411-13d

stabilization of these areas need to be included in the FEIS. An economic analysis of the mitigation plan and long-term road maintenance would also be helpful.

411-14

Page 3-8, *Air Quality*: The analysis should be revised to indicate that there are potential impacts to fish and wildlife resources from vehicle exhaust. The potential impacts should then be analyzed in Section 3.7, Wildlife Resources. This is of particular concern in the more confined reaches of Quitchupah Creek where dispersal of emissions may be restricted. There is evidence that sulfur dioxide (SO_2) and nitrogen compound (NOx) deposition from vehicles and other anthropogenic sources can have detrimental ecological consequences. These changes can include: localized acid rain effects, changes in the N-cycle, alteration of the C:N ration, shifts in structure of biological communities and alteration of the decomposition process and microbial activity (Lee 1998). The overall effect on fish and wildlife could include: localized and seasonal algal blooms in small pools and eddies resulting in hypoxia which could kill larval fish and amphibians; shift in algal community to higher proportion of cyanobacteria which could produce toxic blooms; localized loss of forage types or forage quality for grazers; and increased vulnerability of plants to stresses such as drought and disease.

411-15

Pages 3-28 through 3-33, *Water Quality*: The document asserts that culverts and drainage control associated with the project "would result in reductions in the amount of total dissolved solids within Quitchupah Creek" (See also p. xii). Other cited contributors to the sediment load in Quitchupah Creek include livestock grazing, instream cattle watering, and All-Terrain Vehicle (ATV) crossings, yet the document includes no estimation of the relative contribution of each factor. This makes it difficult to estimate the amount of reduction in TDS and its significance. In addition, livestock grazing and instream cattle watering are expected to continue, but the Cumulative Effects analysis does not address the question of what may occur regarding ATV use. We believe the analysis presented is insufficient to determine what benefits to water quality may accrue from the construction of a road along Quitchupah Creek. We recommend the FEIS expand the analysis accordingly. Any plans to go forward with construction in this area should include mitigation that would reduce sedimentation, including restrictions on livestock and ATV use of the creek and riparian area, particularly during restoration.

411-16

Page 3-30, Table 3.4-4: No units of measure are listed for the columns titled Existing Road (Same as Alternative A), Alternative B, Alternative C, and Alternative D.

411-17

Page 3-31, paragraph. 2, sentence 3: "However, as noted above, salinity greatly increases…." The word "greatly" should be defined and supported from either data that were collected by your agency or a reference to a report done by another source. Would the Thiros and Cordy, 1991 or Mayo and Associates, 1997 reference fit here with some numbers that define "greatly" (reference page 3-23)?

Also in this sentence, "…and any incremental additions to salinity loading would not necessarily be identifiable." This is probably arguable and, again, it would be best to support this statement with a reference from either your own data or data/interpretations from another source.

Response 411-13d
An economic analysis was not prepared, however estimated mitigation costs are on file at the agency offices.

Response 411-14
Climate in the study area shows measurable winds 75 percent of the time (greater than 3.5 mph). The average wind speed is documented to be approximately 9 mph. Dispersion of pollutants is not likely to be inhibited, except for occasional inversion conditions (i.e calm winds). Inversions have not been documented in the canyon study area. Drainage flows (winds) occur on a regular basis in the canyon. Dispersion of combustion pollutants is likely to occur even on calm days, mainly during dawn and dusk hours.

Sulfur dioxide and Nitrogen dioxide are gases. Emissions shown in Table 3.2-1 show total emissions from all haul trucks over the entire course of travel. On a per mile basis the emission rate for nitrogen dioxide is only 0.03 pounds/mile. To our knowledge, acid rain effects, changes in the N-cycle, alterations in the C:N ratio, and shifts in structure of biological communities, and alteration of the decomposition process and microbial activity are not documented to occur at these levels of emissions. EPA has not published emission factors from mobile diesel engines. The sulfur content of the diesel fuel directly effects the rate of SO2 emissions. Comparing stationary internal combustion emission factors of NOx and SO2, SO2 emissions are likely to be one half to one third of NOx emission rates.

Response 411-15
The section has been revised. Please see Responses 397-5 (Federal), 400-3 (Group), and 401-2 (State).

Response 411-16
Editorial changes have been made.

Response 411-17
The referenced sentence has been expanded upon to provide support for the conclusions. Also, please see Response 397-5.

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411-18

Page 3-34, *Soils, Irreversible or Irretrievable Commitment of Resources and Residual Adverse Impacts,* Page 3-50: The document states: the Proposed Action, Alt. B, would cross 600 feet of irrigated and 14,600 feet of non-irrigated Prime Farmland; Alt. C would cross 600 feet of irrigated Prime and Unique Farmland, but 10,400 feet of non-irrigated; and Alt. D would cross 2,300 feet of non-irrigated Prime and unique Farmland. It is important to remember that this is also wildlife habitat for small mammals, rodents and small birds which provide bio-diversity as well as a prey base for raptors. The soils section should make note of potential impacts of occupation of farmland on wildlife species, and the impacts should be analyzed in Section 3.7, Wildlife Resources.

411-19

Page 3-51, *Vegetation and Wetlands*: There is no discussion of the riparian community. As a substantial portion of the proposal would lie in riparian areas, the document should discuss impacts to this crucial community. In addition, the FEIS should describe any mitigation for direct and indirect loss of riparian habitat along Quitchupah Creek.

411-20

Although the DEIS states that "soils on many areas of this route are cryptogamic", no further mention is made of this soil resource, which is valuable for its soil moisture retention capabilities. The we suggest that the cryptogamic soil crusts at the project site be conserved and used where possible as innoculum where soils and vegetation will be reclaimed.

Information about the significance of cryptobiotic soils can be assessed from the USGS URL at www.biology.usgs, under **Biological Resources Locations**, **Forest and Rangeland Ecosystem Science Center**, **Canyonlands Field Station Research Projects**. Particular projects include:

Effects of Disturbance on Cryptobiotic Soil Crusts, and

Restoration of Cryptobiotic Soil Crusts

411-21

Page 3-53, *Wetlands, Potential Impacts*: Only the direct impact, loss of acreage, is mentioned. Other impacts to any remaining wetlands, e.g., runoff from increased traffic and road maintenance activities (especially de-icing) and particulate deposition from exhaust and braking, should be discussed and mitigation offered.

411-22

Pages 3-55 through 3-78, *Wildlife, Fisheries, Threatened, Endangered and Sensitive Species*: Blasting effects to fish and wildlife are not analyzed in the document. As the short-term impacts from blasting during crucial breeding periods can be significant, the FEIS should address this issue. Suitable monitoring and mitigation, including avoidance, should be developed in coordination with the FWS and Utah Division of Wildlife Resources (UDWR).

We have serious concerns about the potential for impacts to the raptors that utilize the numerous nests (up to 13, 9 of which are golden eagle) cited in the DEIS, in all alternatives but the No Action alternative. There may also be significant interruptions to raptor breeding and

Response 411-18
Big game have been observed utilizing the Prime and Unique farmland found on the eastern portion of the Alternative B alignment. This area would be minimally impacted during construction activities, only 1.4 acres out of approximately 150 acres of pasture (less than 1 percent).

Response 411-19
The impact to riparian zone is discussed in Section 3.4. Fencing to exclude livestock on 4.7 miles of riparian corridor would improve the habitat. The impacts to wetlands is confined to filling; sedimentation and emissions are not a factor.

Response 411-20
Although cryptogamic soil crust has been observed in areas along the proposed route and alternatives, no information is available on their extent; the high soil erodibility and the high use by livestock minimizes formation of these crusts over much of the area. Further, the success of restoration of crusts through salvage and innoculation is not well documented at this time and may not be warranted for the small areas affected by this project. However, the salvage and reuse of cryptogamic soils could be done at the direction of the individual land managing agencies/private landowners responsible for the given sections of the project in which these soils may occur in sufficient quantities for salvage; that will be left up to the relevant entities to determine.

Response 411-21
Wetlands present in the Quitchupah Creek area are currently subject to an environment where dust, sediments, and salts are present. Further, road runoff would be controlled and managed much more extensively than present conditions. See Section 3.4.

Response 411-22
No construction activities or blasting would be allowed within 0.5 mile of any active golden eagle nests and seasonal restrictions would be imposed (See Section 3.5). Mitigation measures from the *Utah Field Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin and Muck, January 2002) have been included in the FEIS.

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411-22 cont. reproductive success due to impacts from blasting. The DEIS says that buffer zones and seasonal construction restrictions would likely be required by UDWR. The FEIS should make a commitment to mitigation measures, including avoidance.

We recommend use of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin and Muck, January 2002), which were developed in part to provide consistent application of raptor protection measures statewide and provide full compliance with environmental laws regarding raptor protection. Raptor surveys and mitigation measures are provided in the Raptor Guidelines as recommendations to ensure that proposed projects will avoid adverse impacts to raptors, including the peregrine falcon. Additionally, surveys and mitigation measures, or any modifications thereof, should be developed in consultation with the UDWR and the FWS. A commitment to employ the Guideline recommendations, including seasonal and spatial nest buffers should be included in the FEIS. Long-term impacts from the operation of the road should also be addressed. As you are aware, raptors are protected under the authority of the Migratory Bird Treaty Act (MBTA)(16 U.S.C. § 703-712) which makes it unlawful to take, kill, or possess migratory birds, their parts, nests, or eggs. The Eagle Protection Act (16 U.S.C. § 668) provides additional protection for bald and golden eagles.

411-23 Page 3-56, *Upland Game Birds*: In the first sentence, change "are" to " have".

411-24 Page 3-57, *Potential Impacts No Action - Alternative A*: The last sentence in the paragraph could be improved to more clearly state that existing conditions would remain unchanged for the near future and that current uses would be expected to continue.

411-25 Page 3-58, *Mammals, Big Game*: Third Paragraph. The new road could cause habitat fragmentation, or a disruption of daily or annual travel or migration corridors. The analysis should explain how the direct loss of 45 acres of habitat would affect the deer and elk herds. There also could be additional indirect effects caused by the road, such as a reduction in habitat value in the area adjacent to the road.

411-26 Page 3-58, Fourth Paragraph: The current agency-specified seed mix will not reduce the attraction of big game to the right-of-way. Species such as alfalfa, yellow sweet clover, and crested wheatgrass, at particular times of the year, will serve to attract big game animals to the road side.

411-27 Pages 3-58 and 3-59, *Birds*: Impacts to migratory birds need to be further analyzed relative to the Migratory Bird Treaty Act and Executive Order 13186. How much habitat will be lost and in what habitat types? Will incidental take occur? The document states that construction activities would cause displacement of birds to similar adjacent areas and would likely have minor impacts to the displaced birds. We disagree that this is the only possible scenario. If the areas to which the birds are displaced are already occupied and they are unable to sustain the increased numbers, there may be noticeable reduction in bird populations in the canyons.

Response 411-23
Editorial change has been made.

Response 411-24
Editorial change has been made.

Response 411-25
Analysis of habitat fragmentation, or disruption of daily or annual travel or migration corridors, is in the FEIS (Section 3.5). Information applicable to the Project from the *Evaluation of Ecological Impacts from Highway Development,* EPA document, April, 1994 has been included in the FEIS.

Response 411-26
The area is utilized by big game for winter range up on Water Hollow and spring and summer range along Quitchupah Creek. It is true that the agency-specified seed mix would create an attraction for big game. The seed mixes would be specified by the agencies.

Response 411-27
Habitat types affected by the Project Alternatives have been addressed in the FEIS (Section 3.5). There is a potential for a reduction of migratory bird populations if the adjacent habitat cannot support the displaced bird species.

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411-28

Page 3-59, *Amphibians*: The document fails to specify how much of the suitable amphibian habitat would be impacted. If a substantial percentage of suitable habitat is lost, population isolation from habitat fragmentation could result. The document also should address impacts on amphibians from runoff from all alternatives. The analysis should state whether the impacts would be temporary or permanent.

411-29a

Page 3-60, *Mitigation and Monitoring*: The Section contains Mitigation procedures, but contains no Monitoring examples. Fencing may not necessarily be a mitigation measure for big game. Fencing may actually cause additional impacts to wildlife which also should be analyzed.

411-29b

Page 3-69, *Threatened, Endangered and Candidate Wildlife*: The first sentence should be corrected to read "Three federally-listed wildlife species and one candidate wildlife species were identified by the FWS as having the potential to occur within the project area".

411-29c

Page 3-69, *Bald Eagle (Haliaeetus leucocephalus)*: The analysis should note that increased road kills along the new road may attract bald eagles to the site, increasing the chances of bald eagle/vehicle collisions.

411-29d

Page 3-69, *Mexican Spotted Owl (MSO, Strix occidentalis lucida)*: There needs to be a discussion as to why surveys for MSO's were deemed unnecessary. It is not sufficient simply to state that one was deemed not to be necessary.

411-30a

Page 3-70, *Southwestern Willow Flycatcher (Empidonax traillii extimus)*: Second Paragraph, Second sentence from end of paragraph. Change to .... "presumably it was a breeding bird in a territory". Were additional surveys conducted in 2001?

The discussion should be amended to include the most current information available for southwestern willow flycatcher distribution, including the following:

- The willow flycatcher subspecies inhabiting the riparian corridor in the project proximity is located at the extreme northern boundary of *E.t. extimus*, but within the known range of *E.t. adastus*, (an unlisted species). Experts suggest that the central part of the State of Utah is more likely an area of intergradation between *E.t. extimus* and *E.t. adastus* (Behle, 1985).
- Genetic analysis to date has shown that the willow flycatcher population in central Utah does not have the genetic markers of *E.t. extimus* and is more closely related to *E.t. adastus* (Paxton, 2000).
- Analysis of willow flycatcher vocalizations in central Utah suggest association with *E.t. adastus* (Sedgewick, 2001).

Response 411-28
There will be no loss of amphibian habitat due to mitigation of wetlands and riparian zones, see Chapter 2 in FEIS.

Response 411-29a
Monitoring will be implemented after completion of the Proposed Action or Alternatives. Impacts of fencing of the roadway have been analyzed in the FEIS.

Response 411-29b
The sentence on Page 3-69of the DEIS has been corrected in the FEIS.

Response 411-29c
The FEIS has been amended to include the increased possibility of bald eagle/vehicle collisions with the increase in roadkill. Mitigation measures such as removal of big game road kills has been included in the FEIS.

Response 411-29d
Surveys for the Mexican spotted owl were initiated in the Project Area in the spring of 2002. No Mexican spotted owls were observed or heard during surveys. Results of the surveys have been included in Chapter 3 of the FEIS.

Response 411-30a
A more thorough discussion of willow flycatcher subspecies distribution was included in the Biological Assessment for the Project. The USFWS has determined that the subspecies found in the project area is not the listed subspecies. This information has been included in the FEIS.

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411-30b

Page 3-70, *Yellow-billed cuckoo*: Is there cuckoo habitat in the project area or not? The statements that habitat is "essentially nonexistent" and "extremely limited" in the area indicate that some habitat must exist and that the necessary inventories must be conducted.

411-30c

Page 3-72, *Spotted Bat*: Second Paragraph. Is there suitable habitat for spotted bats within the project area? If so, would impacts be anticipated?

411-31

Page 3-73, *Bicknell Milkvetch* and Page 3-74, *Basalt Milkvetch*: This document should analyze the potential for impact to these species. It is not sufficient to simply state that surveys will be conducted prior to construction. What actions would be taken if the species are found and construction would severely impact them? Surveys need to be conducted in time to provide an appropriate analysis.

411-32

Page 3-74, *UDWR Utah Sensitive Species List*: We suggest this heading be eliminated and the discussion following included on the previous pages under the Sensitive Species discussion. These species should also be added to Table 3.9-2., QUITCHUPAH CREEK ROAD DEIS. There is no mention of the Utah BLM Sensitive Animal Species List as identified in BLM Instruction Memorandum No. UT 2001-081. This is the official Utah BLM sensitive animal species list and should be cited in the FEIS.

411-33

Page 3-105: The Numic Expansion is at this point a theory, and not a fact. Many archaeologists believe that the Numic peoples (which would have included ancestors of current Ute, Paiute, Shoshone, Goshute and Comanche) advanced from a point of origin in the southwestern Great Basin, possibly southeastern California after 1000 AD and moved north and east as populations grew. If true, they would have arrived in Utah around 1300 AD, which is consistent with some archaeological data. But there are other theories that dispute the concept of a Numic Expansion, and many of the tribes in question state that their oral histories are as valid or more valid than archaeological theory. They have been here for thousands of years. A few words should be added to indicate that current theories "suggest" that these emigrations/immigrations took place.

Page 3-106: The final rulemaking for the latest regulations at 36 CFR 800 were published in the Federal Register on December 12, 2000, and made effective January 11, 2001 (see F.R. 77725-77739). The document referenced here was most likely the proposed draft rule.

Page 3-107 and 108: On page 3-107, Alternative A is described as the No Action Alternative, with no impacts. Alternative B is described as the action likely to impact resources of concern to tribes. On page 3-108, however, the text says that impacts of Alternatives C and D follow from Alternative A. This is either a typographical error, or reflects a change in order of the alternatives that was not properly edited. Both Alternatives C and D should reference the impacts to sacred values, etc., from Alternative B rather than A.

411-34

Figure 3-1, Geology Map: The Geology Map is difficult to read and does not provide the information needed to assess the geologic hazards inherent to this project. The various surficial units are poorly differentiated by the various shades of light green; the symbols for the geologic

Response 411-30b
Suitable habitat for the yellow-billed cuckoo is extremely limited within the Project Area. There is a narrow riparian corridor consisting of cottonwood trees in the eastern portion of the Alternative B that is bordered by sagebrush/juniper and agricultural fields. This habitat would not be impacted by the proposed road.

Response 411-30 c
Suitable foraging and roosting habitat for spotted bats does exist within the Project Area. No surveys for this species were requested by the Forest Service. Impacts to foraging habitat (by Alternative) for sensitive bat species have been addressed within the Wildlife Resources, Section 3.5 of the FEIS.

Response 411-31
See Section 3.7 Threatened, Endangered, and Sensitive Species. Preconstruction surveys for these two sensitive species would be conducted to record locations in the selected road construction corridor and specific mitigation measures made to protect these plants should they be present.

Response 411-32
Editorial changes have been made.

Response 411-33
Editorial changes have been made.

Response 411-34
There is no Quitchupah Canyon, the correct USGS designated name is Quitchupah Creek and will be corrected in text. The impact to or from certain geologic formations is not considered a significant impact due to design of proposed road so cross-sections of the geologic formations throughout the project area would seem redundant.

The Geology Map used in the DEIS is the only one available for the area. This map is not included in the FEIS.

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411-34 cont.

411-35

units, especially in the canyon where the road will be built, are too small to read and often obscured by the topographic lines; geologic contacts are poorly or incorrectly drawn; and the line symbols in the legend are the same for syncline, anticline, monocline, geologic unit contact and fault, most of which do not relate to the line symbols drawn on the map. The cross section example (section 22) needs to be for a section that is actually on the map. The various canyons and washes are not adequately labeled, and Quitchupah Canyon, which is discussed in the text, does not appear on any of the maps. Because of the random and repeated scale changes from map to map in the DEIS, comparisons among the maps to assess the surficial relations of each map's subject are limited.

In addition, geologic cross sections from the top of the canyon to depth for 1) the beginning of the road and 2) end of the road in Convulsion Canyon would be helpful to assess the geologic problems and hazards that will be associated with this project.

Figure 3-4, Soils Map: The soils map is inadequate for use in soil analysis related to the road. The northern section of the map is not included so that those sections cannot be evaluated. These north sections relate to geologic hazards associated with the north canyon walls. The soils section in the text (3.5 SOILS, page 3-34 – 3-50) and the tables of soil types do not include descriptions of many of the important soils, such as soil types 57, 58, 73, 77, all of which are associated with the mapped landslide area. Also, it is difficult to relate the salinity values of the soils shown on the map to the underlying geologic shale units, Mansuk Shale and Blue Gate Shale, for sections of the proposed road. The Mansuk Shale and Blue Gate Shale are members of the Mancos Shale Formation that is repeatedly mentioned in the text as causing construction, maintenance, and salinity problems in this area.

Thank you for this opportunity to comment. We look forward to future cooperation in the analysis and decision making process for the proposed road.

Sincerely,

Robert F. Stewart
Regional Environmental Officer

Enclosure - Literature Referenced

Response 411-34 cont.
A sizeable amount of research went into the creation of the maps in the EIS. The maps that are in the EIS are the best and in some instances are the only available maps that could be obtained.

Response 411-35
The soils descriptions given in the EIS are for areas directly affected by the proposed project. The landslide area and the related soils noted in the comment are outside of this area, and the landslide potential is described in the geology section of the EIS and does not need to be repeated in the soils section. Further, the USFS soil survey has not been finalized and detailed soils descriptions are not available beyond those developed through taxonomic classifications.

Parent materials for the soils mapped on the non-forest lands are given in the Soils Technical Report for this project, which is referenced in the EIS soils section.

The landslide feature is not considered a threat to the road so the soils outside the road corridor are not included because no impacts are associated with these soils. Soils 57,58,73, and 77 are not within the road corridor and will not be impacted by the road construction.

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